

The Effects of Thinking Maps-Aided Problem-Based Learning on Motivation Towards Science Learning among Fifth Graders

ABSTRACT

This research was conducted to evaluate the effects of Thinking Maps (TM)-aided Problem-based Learning (PBL) teaching method (TM-PBL) on motivation towards science learning among Fifth Graders. A quasi-experimental pre-test/post-test non-equivalent control group design was employed to measure students' motivation towards science learning (SMTSL) in motivational factors of self-efficacy, active learning strategies, science learning value, performance goal, achievement goal, and learning environment stimulation. The sample consisted of 270 Fifth Graders aged 11 years old. The students were randomly selected and assigned to TM-PBL (n=90), PBL (n=90), and Conventional Problem Solving (CPS) (n=90) teaching groups. The SMTSL questionnaire was administered prior to and after each intervention. A MANCOVA was conducted on the post-test measures of motivation using the students' pre-test as the covariates. The result indicated that students taught via the TM-PBL teaching method gained significantly higher levels than their counterparts from the PBL group in Self-efficacy, Active learning strategies, Achievement Goal and Learning environment stimulation. Likewise, students taught via the TM-PBL teaching method gained significantly higher levels than their counterparts from the CPS group in all motivational factors. The findings suggest that the Thinking Maps-aided Problem-Based Learning method is effective in improving motivation towards science learning among Fifth Graders.